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Sub. – Biology

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LESSON 1 Reproduction in Organisms

Reproduction is a biological process of formation of new offsprings from the pre-existing organism. Reproduction becomes a vital process without which species cannot survive for long. It ensures continuity of species generation after generations as older individuals undergo senescence and ultimately they die.

Life span – • The period from birth to the natural death of an organism represents its **life span**. Life span of organisms varies from few days (Butterfly-1 to 2 weeks) to thousands of years (Banyan tree).

Types of Reproduction:

Based on whether there is one or two organisms taking part in the process of reproduction

- ASEXUAL REPRODUCTION
- SEXUAL REPRODUCTION

When the offspring is produced by single parents with or without the involvement of gamete formation, the reproduction is called **asexual reproduction**.

When two parents (opposite sex) participate in the reproduction process and also involves the fusion of male and female gametes, it is called **sexual reproduction**.

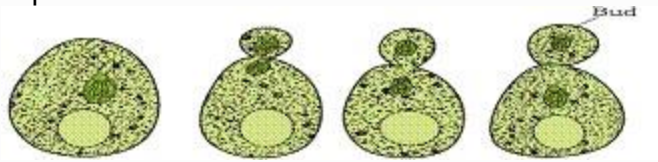
Asexual Reproduction

1. Usually followed by organisms with relatively simpler organizations.
2. Offsprings produced by single parent.
3. With/without involvement of gamete formation.
4. Offsprings produced are genetically and morphologically similar to each other and to the parent, i.e. they are **clones**.

• In Protista and Monera, the parent cells divide into two to give rise to new individuals. Thus, in these organisms **cell division** is the mode of reproduction itself.

• **Binary fission**– in this method of asexual reproduction, a cell divides into two halves and rapidly grows into an adult. Ex- amoeba, paramecium.

- **Budding**– small buds are produced that remain attached initially with parents and get separated on maturation. Ex. Yeast.



- Fungi and simple plants like algae reproduce through special reproductive structures like zoospores (motile structure), conidia (penicillium), buds (hydra) and gemmules (sponges).
- In plants, vegetative reproduction occurs by vegetative propagules like runner, rhizome, sucker, tuber, offset and bulb.